C++ ASSIGNMENT

1.Ques :Count the number of elements strictly greater than x.

Ans:
```cpp
#include<iostream>
#include<vector>
using namespace std;
int main() {
    int n;
    cout<<"Enter the size of Array: ";
    cin>>n;
    vector<int> v;
    for(int i=0;i<n;i++){
        int q;
        cout<<"Enter element: ";
        cin>>q;
        v.push_back(q);
    }
    int x;
    cout<<"Enter the target: ";
    cin>>x;
    int count=0;
    for(int i=0;i<n;i++){
        if(v[i]>x){
            count++;
        }
    }
    cout<<"Number of element Greater than target is "<<count;
    return 0;
}
```

2.Ques :WAP to find the largest three elements in the array.

Ans: #include<iostream>
#include<vector>
using namespace std;
int main() {
        int n;
        cout<<"Enter the size of Array: ";
        cin>>n;
        vector<int> v;
        for(int i=0;i<n;i++){
                int q;
                cout<<"Enter element: ";
                cin>>q;
                v.push_back(q);
        }
        int max1=INT_MIN;
        int max2=INT_MIN;
        int max3=INT_MIN;
        for(int i=0;i<n;i++){
                if(max1<v[i]){
                        max3=max2;
                        max2=max1;
                        max1=v[i];
                }
                else if(max2<v[i] && v[i]!=max1){
                        max3=max2;
                        max2=v[i];
                }
                else if(max3<v[i] && v[i]!=max2){
                        max3=v[i];

```cpp
        }
    }
    cout<<max1;
    cout<<max2;
    cout<<max3;
    return 0;
}
```

3.Ques :Check if the given array is sorted or not

Ans:
```cpp
#include<iostream>
#include<vector>
using namespace std;
int main() {
    int n;
    cout<<"Enter the size of Array: ";
    cin>>n;
    vector<int> v;
    for(int i=0;i<n;i++){
        int q;
        cout<<"Enter element: ";
        cin>>q;
        v.push_back(q);
    }
    bool flag=false;
    for(int i=0;i<=n-2;i++){
        for(int j=i+1;j<=n-1;j++){
            if(v[i]>v[j]){
                flag=true;
            }
        }
    }
```

```cpp
        if(flag==false) cout<<"Array Sorted";
        else cout<<"Array is not Sorted";
        return 0;
}
```

4.Ques:Find the difference between the sum of elements at even indices to the sum of elements at odd indices.

Ans:
```cpp
#include<iostream>
#include<vector>
using namespace std;
int main() {
        int n;
        cout<<"Enter the size of Array: ";
        cin>>n;
        vector<int> v;
        for(int i=0;i<n;i++){
                int q;
                cout<<"Enter element: ";
                cin>>q;
                v.push_back(q);
        }
        int diff=0;
        int sum1,sum2=0;
        for(int i=0;i<=n-1;i++){
                if(i%2==0) sum1=sum1+v[i];
                else sum2=sum2+v[i];
                diff=sum1-sum2;
        }
        cout<<"Difference between odd and even index values: "<<diff;
        return 0;
```

}

5.Ques:Given an array of integers, change the value of all odd indexed elements to its second multiple and increment all even indexed values by 10.

Ans: #include<iostream>
#include<vector>
using namespace std;
int main() {

```
    int n;
    cout<<"Enter the size of Array: ";
    cin>>n;
    vector<int> v;
    for(int i=0;i<n;i++){
        int q;
        cout<<"Enter element: ";
        cin>>q;
        v.push_back(q);
    }
    for(int i=0;i<=n-1;i++){
        if(i%2==0) v[i]+=10;
        else v[i]*=2;
    }
    for(int i=0;i<=n-1;i++){
        cout<<v[i]<<" ";
    }
    return 0;
}
```

6.Ques:Find the unique number in a given Array where all the elements are being repeated twice with one value being unique.

Ans:
```cpp
#include<iostream>
using namespace std;
int main(){
    int n;
    cout<<"Enter Total number oF element: ";
    cin>>n;
    int arr[n];
    for(int i=0;i<=n-1;i++){
        cout<<"Enter the element: ";
        cin>>arr[i];
    }
    for(int i=0;i<=n-1;i++){
        int c=0;
        for(int j=0;j<=n-1;j++){
            if(arr[i]==arr[j]){
                c++;
            }
        }
        if(c==1) cout<<arr[i]<<" ";
    }
    return 0;
}
```

7.Ques: If an array arr contains n elements, then check if the given array is a palindrome or not

Ans:
```cpp
#include<iostream>
#include<vector>
using namespace std;
void display(vector <int>& a){
    for(int i=0;i<a.size();i++){
        cout<<a[i]<<" ";
```

```cpp
    }
        cout<<endl;
}
int main(){
        int n;
    cin>>n;
    int a;
    vector<int> v1;
    for(int i=0 ; i<n ; i++)
    {
        cin>>a;
        v1.push_back(a);
    }
        vector<int> v2(v1.size());
        for(int i=0;i<=v2.size()-1;i++){
                int j=v1.size()-1-i;
                v2[i]=v1[j];
        }
        int c=0;
        for(int i=0;i<=n-1;i++){
                if(v2[i]==v1[i]){
                        c++;
                }
        }
        if(c==n) cout<<"palin";
        else cout<<"nope";
        return 0;
}
```

8.Ques:Find the error.

```cpp
double getAverage(int arr[], int size);
```

```
int main () {
int balance[5] = {1000, 2, 3, 17, 50};
double avg;
avg = getAverage( balance[0], 5 ) ;
cout << "Average value is: " << avg << endl;
return 0;
}
```

Ans: error in 5 th line . It's not balance[0],it is & balance[0].